

WS-15J

October 4, 2001

Robert J. Whiting
Chief, Regulatory Branch
U.S. Army Corps of Engineers
St. Paul District
St. Paul, MN 55101-1638

RE: 94-01298-IP-DLB

Dear Mr. Whiting:

We have received the draft Crandon Mine Project EIS Groundwater Modeling Plan by Mark Meyers, dated September 4, 2001. Thank you for the opportunity to review this document. It is understood that comments are welcome on COE's MODFLOW throughout the process and not just at this draft workplan stage. As you know, the U.S. Environmental Protection Agency (EPA) has been reviewing the groundwater issues for this project to help support the COE. To compliment the groundwater modeling effort, the EPA is running the Hydrological Simulation Program - Fortran (HSPF) surface water model, and thus is not evaluating the groundwater model in depth. Together, the COE's MODFLOW model and the EPA's HSPF model will be useful tools to help evaluate the potential impacts of the proposed mine and mitigation.

Since this plan has been drafted, the Wisconsin Department of Natural Resources (WDNR) has announced that they will accept the mining company's proposal to maintain a 600 gallons per minute inflow rate (based on a 30-day rolling average). The COE's groundwater modeling work plan should be independent of this proposal and evaluate the inflow with its own model inputs. During the meeting held on September 20, 2001, the COE stated that permit conditions (i.e., agreeing to a 600 gpm inflow rate) would get addressed after the impacts of the mine activities are determined. We agree with this approach.

Below are comments on the draft Groundwater Modeling Plan:

1) Introduction: The introduction section needs to highlight the differences (major and minor) between the COE's proposed MODFLOW model, the WDNR's model and Nicolet Minerals Company's (NMC's) model. The introduction section should better emphasize the need for this model. The draft plan's methodology section touches on these issues, but a clearer, more detailed explanation should be earlier in the Introduction section.

2) Issues: The draft plan does a very good job of summarizing the issues that have been discussed with the COE over the last several years. There should be a statement after each of the issues stating whether or not the proposed COE MODFLOW will directly address the issue, or perhaps indirectly address it. For example, the issue under item 1) Groundwater levels would have a statement such as - “COE’s MODFLOW will provide drawdown maps” or for Wetlands, it may state, “will not be directly addressed by MODFLOW but based on MODFLOW results, other reviewers will be able to assess impacts to wetlands”. With clearer statements, the reviewer will better know what to expect from the COE’s model.

3) Issues: A sixth issue needs to be added to this list; Impacts to groundwater after mining is complete. The bullets that should follow would include: (and the COE should indicate if MODFLOW would address these issues as mentioned in comment #2 above.)

- reflooded mine
- open access workings
- pump well to reflood mine
- contaminants migration
- soil leaching (Soils getting re-saturated after being dried from the pumping during the mining)
- pump and treat issues

4) Methodology: Similar expansion of this section as discussed in comment 1 above. More detail on what will be different with the other MODFLOW models (WDNR’s and NMC’s) is needed here.

5) Groundwater Modeling Goals: The third bullet should be split into two bullets; the first reading the same, minus the wetlands; and the new bullet stating, “provide information to COE biologists and others so that they may determine reasonable ranges of estimates of the location and magnitude of changes to wetlands”.

6) Groundwater Modeling Goals: An additional bullet should be added stating: “To contribute toward the evaluation of the effectiveness of NMC’s grout proposal”.

7) Proposed Groundwater Modeling Approach (pre-mining and mining conditions): As mentioned in comment #1 above, more detail is needed to differentiate the work proposed under this plan and the work already conducted by NMC and by the WDNR. Many of the points raised in this section state that the parameters being used are the same as those used by the WDNR, so the COE model is assumed to look very much like the WDNR model when complete. For the parameters that are to be different from the WDNR’s, more detail is needed as to the significance of these changes. The COE’s model needs to be an independent review of the groundwater issues, and should not rely on the WDNR’s or NMC’s model parameters, without better justification as to why these parameters are being used (i.e., due to lack of data, the WDNR parameters will be used; or since the WDNR’s parameters are based on concepts/interpretations that the COE has reviewed and agrees with, the WDNR parameters will be used.)

8) Model Predictions: During the meetings held in Madison on September 19-21, 2001, the COE

announced that three mining alternatives would likely be evaluated within the federal EIS: no-action, full-mining and zinc-only mining. The no-action alternative will be represented by the pre-mining conditions and the full-mining alternative will be represented by activities outlined in NMC's EIR and within this plan. Will the zinc-only mining alternative have any special data needs or modeling parameters that differ for the full-mining alternative?

9) Solute Transport Models: For the sake of efficiency and duplication reduction, the EPA concurs that the COE does not run their own solute transport models, assuming that the WDNR and USGS models incorporate all of the COE's and cooperating agencies' comments to the COE's satisfaction. Does the COE have an alternative plan if the WDNR and/or USGS models do not adequately address comments and concerns of the COE and/or Cooperating Agencies?

10) Schedule: No comments, but assuming the COE will be sensitive to Cooperative Agency requests for review extensions if the groundwater modeling draft and final reports are released concurrently with other EIS-related documents.

11) Discussion - Wetlands: This section states that wetlands will not be specifically represented in the COE model. This seems to contradict the modeling goals listed under the Methodology section; see comment #5 above. Also, in this section (second paragraph) it states, "Considering model error, ground elevation topographic limitations and errors,". How large are these errors and what impact on wetland evaluation will occur due to these errors?

As mentioned above, the U.S. EPA has been modeling using HSPF and when the results are provided to wetland specialists and others, they will assist the COE in determining potential impacts to the streams and wetlands in the area of the proposed mine. We appreciate the COE's support of the HSPF model and its inclusion in this groundwater modeling plan and expect greater input in the near future.

Again, thanks for the opportunity to provide comments on this draft groundwater modeling plan. If you have any questions regarding the above comments, please let me know.

Sincerely,

Daniel J. Cozza, Crandon Mine Project Manager
U.S. Environmental Protection Agency

cc:

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